

## **EXHIBIT E**



## The Ridge Vent With The Shingle On Top



Cor-A-Vent is a registered trademark of Cor-A-Vent, Inc. and is used with the permission of the owner. Cor-A-Vent is a registered trademark of Cor-A-Vent, Inc. in the U.S. with an expanding network of 300 dealers and installers. The success of Cor-A-Vent's unique design and dependability by architectural contractors and owners has made Cor-A-Vent the recognized standard of excellence in the field of ridge venting. Recognizing this, the industry has moved rapidly to imitate. In the success of their innovative system. As a result, a number of new products have been introduced, most featuring the merits of "the shingle-on-top" but lacking the benefit of Cor-A-Vent's unique, patented design and "on the job" testing since 1970.

### COR-A-VENT FEATURES

- **PERFECT COLOR AND TEXTURE MATCH**
- **BEST APPEARANCE: LOW PROFILE, BAFFLE FREE**
- **HIP VENT APPLICATION, WITH RIDGE VENT PERFORMANCE**
- **HIGH RESISTANCE TO IMPACT AND CHEMICALS**
- **DEPENDABLE: WON'T LEAK OR BLOW OFF**
- **ADAPTABLE TO CLESTORY, SHED, UNEQUAL AND STEEP PITCHED ROOFS**
- **WORKS ON SHINGLE, SHAKE AND MISSION TILE**
- **PROTECTS ROOF AND ATTIC FROM MOISTURE AND OVERHEATING**
- **EASY TO TRANSPORT, HANDLE AND INSTALL**
- **ECONOMICAL: MINIMAL INVENTORY, WASTE OR DAMAGE**
- **SAVE ON ACCESSORIES: END CAPS ONLY**
- **REDUCE ENERGY (AIR CONDITIONING) COSTS**
- **DELIVERS 18 SQUARE INCHES NET FREE VENTILATING AREA PER FOOT**
- **SELF CLEANING**
- **MEETS NATIONAL BUILDING CODES, HUD/FHA APPROVED, B.O.C.A. EVALUATED**
- **PROVEN BY FIELD EXPERIENCE SINCE 1970**

### COR-A-VENT SPECIFICATIONS

Product	Cat. No.	Net Free Vent Area	Units Per Carton	Size	Carton Weight	Color
Ridge Vent	V-400	18 Sq. Inches Per. Lin. Ft.	12	4 Ft. Length	30 Lbs.	Black
Strip Vent	S-400	9 Sq. Inches Per. Lin. Ft.	24	1" x 2" 4 Ft.	12 Lbs.	Black or White
End Cap	EC-400	ALUMINUM	12	Eleven Inches	1 Lb.	Black

#### COR-A-VENT™



Is a member of the Home Ventilating Institute, a division of the Air Movement and Control Association.

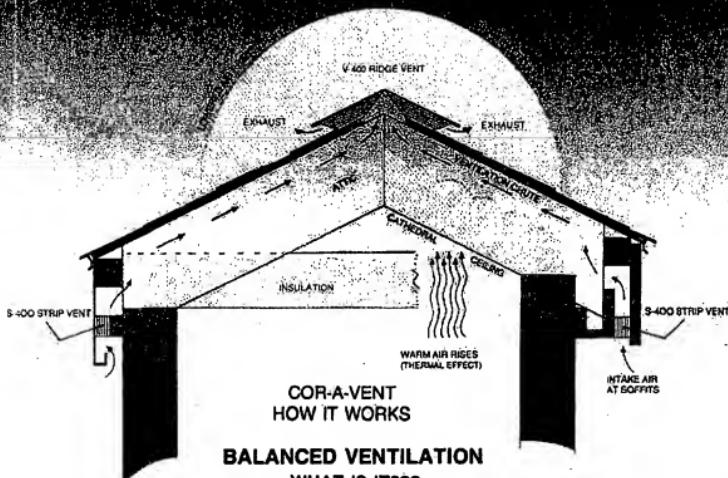
Meets or exceeds National Building Codes.

Offered limited LIFE-TIME WARRANTY.

Evaluated for conformance to Other National Standards. Availability of recommended products depends on local availability.

Model A-400, A-400S, S-400, EC-400.





**Balanced ventilation** system is one that best utilizes the three natural forces of air pressure, thermal effect and diffusion. Basically for every one inch of exhaust vent you must balance it with one square inch of intake vent.

Continuous orientation of intake (lower) vents at overhang and soffit, and exhaust (upper) vents at ridge and hip locations is recommended. Ventilation air will move into the attic through vents located within the positive pressure (intake) areas and will exhaust through the vent opening at the negative pressure areas, the ridge. Wind moving over the ridge literally "siphons" the air out of the attic, by the same aerodynamic principle that lifts an airplane off the ground.

#### THE RIDGE VENT MUST ALWAYS BE INSTALLED IN COMBINATION WITH SOFFIT VENTS.

If the ridge vent were to be installed alone, then part of it would serve as an inlet because of air pressure differences along the ridge. This would cause weather infiltration.

The "Ventilation Chute" or air passageway between the inlet soffit vents and the outlet ridge vent must not be blocked or restricted so that the air flow is impeded. Should this condition exist, then the ridge would function as without soffit vent. This would also cause weather infiltration.

**CALCULATION RULE:** Intake or soffit vents (lower elevation) may be larger in square inches of Net Free Vent Area (N.F.V.A.), but not less than the square inches of N.F.V.A. exhaust provided by the ridge vent.

As a continuous ridge vent Cor-A-Vent provides 16 square inches of net free vent area per linear foot. (N.F.V.A.)

As a soffit vent (S-400 Strip Vent) or equal, the N.F.V.A. provided is 8 square inches per linear foot.

Other products may be used along with our ridge vent, provided the balance of free air inches (N.F.V.A.) and exhaust is calculated and provided for. The ventilation chute must be of sufficient dimension to allow the passage of intake air from the intake vents (lower elevation) to and out through the exhaust vents (higher elevation) at the ridge.

For additional application of this principle, please refer to Venting Considerations (Fig. 15, page 8).

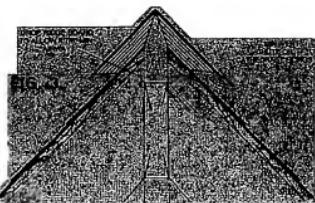
#### 1. DETERMINING VENTILATION REQUIREMENTS

For a roof of 16 square inches per linear foot of COR-A-VENT, REPRESENTATIVE (through roof vents), therefore, we will have a minimum requirement for the COR-A-VENT engineering department.

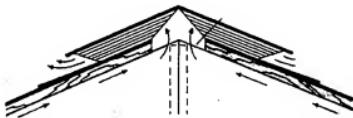
## PREPARATION AND INSTALLATION

### 1. PREPARING FOR THE INSTALLATION:

Choose the appropriate ridge slot that fits your particular application, as shown in figures 2, 3, & 5. With trusses provide a  $1\frac{1}{4}$ " continuous slot at ridge thru sheathing to allow air passage. If a ridge board is used, drop it  $1\frac{1}{4}$ " to allow air flow or cut a  $\frac{3}{8}$ " slot each side as shown. Set the saw to make the cut vertical and deep enough to cut through the roof sheathing but *not* into the rafters. The slots should be cut straight and accurately to assure maximum support and adequate airways. The asphalt "dry sheet" and shingles extend up to but *not* over any part of the ridge slot. Note: On existing roofs a carbide saw blade works well in cutting the slot through the shingles and roof sheathing at one time. **ALWAYS WEAR EYE PROTECTION.** Stop the slot 8 to 12 inches from the end wall, chimney, etc. On hip vents, stop the slot 36 inches short of the outer (warm) walls. Shingle over the unsloped section then install the Cor-A-Vent to the end for appearance. Note: Check the local building code for clearance between the ridge slot and any masonry fire walls.



STEEP PITCH W/LOWERED RIDGE BOARD



TRUSS OR RIDGE BOARD

FIG. 2

### 2. INSTALLING THE COR-A-VENT:

One person can easily handle the installation using only a hammer, roofing knife and caulking gun. Fit a metal end cap over the end of the first (and last) piece of Cor-A-Vent. Lay a bead of caulking on the under side of the end cap, press the piece and cap into position and nail (with 2 inch nails provided) through the end cap, the Cor-A-Vent and into the roof sheathing, as shown in figure 4. Drive the nails down flush so that the vent and cap are held down firmly but do *not* indent by over driving. Butt each successive piece up snugly, checking for straight alignment. Use two nails in each end and one at each side at center, pulling up slightly when nailing second side to insure that the vent is nailed at the same pitch as the roof.



CUTTING THE RIDGE SLOT

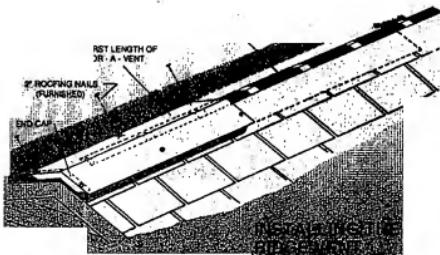


FIG. 4



**CAPPING THE RIDGE**

When performing the cap shingle application, follow the steps outlined below. This is the recommended method for Cor-A-Vent. Please note, however, that the following instructions are not the only correct way to cap a ridge. Other methods are acceptable, as long as they are safe and do not compromise the integrity of the roof system.

**NOTICE:** Use the 20 nail pattern that is provided in every Cor-A-Vent box.

When capping a ridge, the following steps should be followed:

1. Both ends of the ridge beam should be cut square.

2. Measure the ridge beam for length.

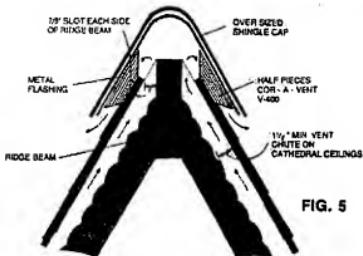
3. Application of shingles to the ridge.

4. Use the 20 nail pattern that is provided in every Cor-A-Vent box.

**NEVER FASTEN WITH STAPLES**

Performing (bending to the shape of the ridge) helps keep the shingles down flat to the vent and avoids cracking or "humping" up over the ridge, particularly in cold weather. Apply the cap shingles in regular fashion with one nail each side, up approximately  $2\frac{1}{2}$  inches from the overhanging edge. Drive nails **flush**, **do not indent**. End caps are required only on the exposed ends of the first and last pieces of ridge vent.

For capping the ridges on shake or mission tile roofs, see special instructions in figures 7 & 8.

**4. STEEP PITCH AND WIDE RIDGE BEAM**

1. Deck & shingle, leaving a  $\frac{1}{8}$  inch air space between beam edge and decking at narrowest point.
2. Cut Cor-A-Vent into 2 half pieces lengthwise.
3. Nail half pieces over shingles and into decking as shown. (Use long nails provided)
4. Fasten metal flashing over Cor-A-Vent.
5. Cut oversize shingle ridge caps or lap 12" cap shingles. Apply in the normal nailing pattern directly over the flashing. (Use long nails provided)

**5. COR-A-VENT HIP INSTALLATION INSTRUCTIONS**

If the ridge length is too short for proper ventilation, Cor-A-Vent may be applied in equal lengths to the upper end of the hips.

Cor-A-Vent continuous hip vent installation instructions when used on hips of a roof and when roof covering is Class A, B, or C (3 in 1) asphalt shingles. With Tile or Shake Shingles see special instructions. Follow the same procedure as with ridge vent application PLUS:

1. With 18" centers and by wood deck blocker not required.
2. With 24" rafter centers, the slot in roof sheathing over roof hip must be supported in the center with a wood deck blocker.
3. Cut Cor-A-Vent into 2 half pieces lengthwise.
4. Nail half pieces over shingles and into decking as shown.
5. Fasten metal flashing over Cor-A-Vent.
6. Cut oversize shingle ridge caps or lap 12" cap shingles. Apply in the normal nailing pattern directly over the flashing. (Use long nails provided)

**CAPPING THE RIDGE VENT**

**12" CAP SHINGLES  
LAPPED AND ALTERNATED**

Note: Our standard end cap will not work here. Weather proof the ridge vent voids at each end, metal, wood, etc.

- (6.) Provide for an equal amount of inlet ventilation @ eave or soffit. Suggest Cor-A-Vent S-400 Strip Vent or equal. (N.F.V.A.)

\* Note: This application would apply anytime the angle of the roof pitch necessitates separating Cor-A-Vent into ½ pieces in order to allow sufficient air passage for the vent to work.  $\frac{1}{8}$ " minimum airway each side of ridge beam. See Fig. 5.

- (5.) Apply end cap to Cor-A-Vent and proceed with shingling in the conventional manner. The bead of caulk will form a seal between top of roof shingles and the hip vent.

- (6.) When used on hips, the slot, vent and shingle caps must all be continuous, in alignment and fit to provide a weather proof and good appearing job. Where hip and ridge vents intersect, cut a common edge on Cor-A-Vent so cutted edges remain the same width and edge fitting. See Fig. 6. (For appearance, see photo on front cover.)

**HIP AND RIDGE INTERSECTION**

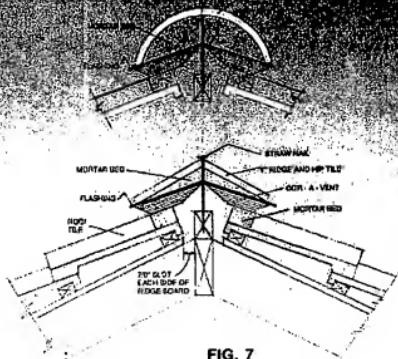
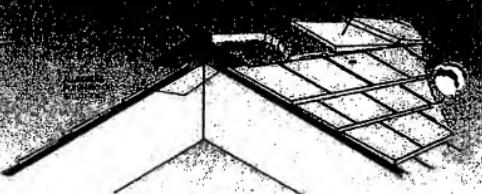


FIG. 7

**6. MISSION TITLE:**

Due to the many variations between different tile manufacturers the above drawings are suggested applications only. For more specific information contact the Cor-A-Vent engineering dept. Include the particular milgs. drawings and specifications together with a description of your job.

(For appearance see photo on front cover.)



## SHAKES OR SHINGLES

FIG. 8

## INSTALLING RIDGE VENT WITH CEDAR SHAKES OR SHINGLES.

- (1.) At the ridge slot, choose shakes of similar thickness to provide as smooth a bed as possible.
- (2.) Lay bead of caulk on top and between edges of shakes to provide weather seal between shakes and vent.
- (3.) Install ridge vent as shown on page 4.
- (4.) Install ridge flashing and cap with shakes or saddle boards as shown in figure 8. Note: Discard nails provided with Cor-A-Vent and use nails of sufficient length to penetrate through roof sheathing.

(For appearance see photo on front cover.)

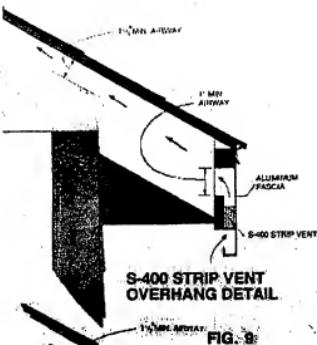


FIG. 9

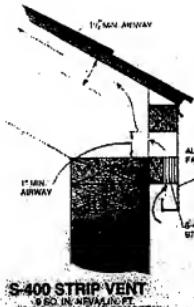
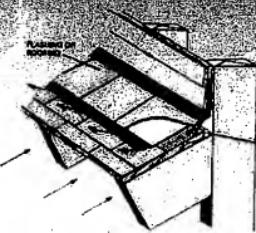


FIG. 10

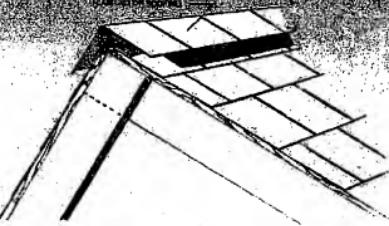


## STRIP VENDE

GO AWAY FROM PROPERTY AND THOSE WHO OWN IT



## CLERESTORY



## UNEQUAL PITCH

**FIG. 12**

**THE RIDGE VENT MUST ALWAYS BE INSTALLED  
IN COMBINATION WITH SOFFIT VENTS.**

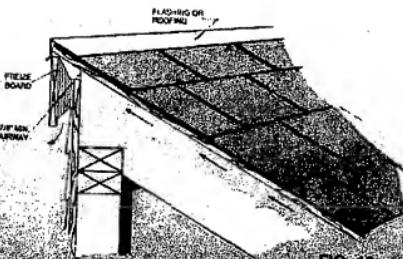
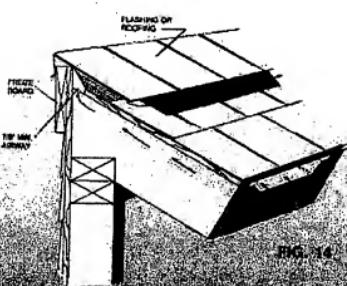


FIG. 13



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is adequately ventilated. See page 2 or Cor-A-Vent's Ventilation Calculator.

- (3.) Look for other sources of moisture, i.e.: ventilating fans exhausting into the attic area instead of to the outside; unvented dryers; wet firewood stored indoors, etc.
- (4.) Inspect the intake (soffit/leve) vents and airway between the insulation and the under side of the roof sheathing to be sure they are large enough and unobstructed. Similarly check the ridge vent, from inside the attic, for anything that might restrict the airflow out of the attic area.

**2. Attic Overheating:** See section paragraphs (2) and (4) above

**3. Wet Spots in Attic or Ceilings.** On ceilings these appear as stains.

- (1.) Check the ridge vent, from up on the roof, to insure it is nailed down firmly against the shingles. If it is a shake roof, does it have the flashings described on page 6, figure 6?
- (2.) Have end caps been installed at both ends of the ridge? Look to see if they have been properly nailed in place and caulked as described in the installation on page 4, figure 4.
- (3.) If the water spots are located near a chimney or skylights on a cathedral ceiling, they may not be leaks. This could be condensation from water vapor trapped between the rafters that have been "headed off" to provide the opening for the skylight or chimney. Drill a series of "boring" holes along the upper side of the rafters into the adjoining cavities where there is ventilation. Note: This should only be done by an experienced contractor to avoid weakening of the roof structure.

the ceiling to correct the condition.

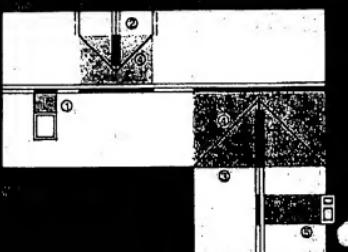
- (3.) The ridge vent can be easily deactivated from the roof side with Weather-shield V-400 Flashing, available from your local dealer. For complete information contact your local dealer, supplier or Cor-A-Vent Inc.

**5. Ridge Vent Is Uneven:** The vent should be straight and uniformly about 1 inch high.

- (1.) If the lower edges of the vent appear to be uneven it is probably caused by improper nailing. Check to see that the nails have penetrated the roof sheathing and the vent is firmly nailed down. Also, feel under the cap shingles to determine if the nails have been indented (over driven) so as to cause the uneven appearance.
- (2.) Inspect the ridge slot from the attic side to see if all the nails have penetrated the roof sheathing. If the slot has been cut too wide for proper nailing, remove the cap shingles and vent and install as shown for "Steep Pitched and Wide Ridge Beams" on page 5, figure 5.
- (3.) If the ridge appears "humped" up in places, particularly during hot weather, most likely it is caused by improper nailing. Polyethylenes will expand during hot weather and if the ends are not nailed when the sections are "tacked" in place or the roofing nails do not penetrate the roof sheathing, the ridge may raise up. Refer to installation instructions on page 5, paragraph 3.

## VENTING CONSIDERATIONS

### THE MOST COMMON AREAS WHERE IMBALANCE OCCURS



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